

d.) Amendments to the Claims.

Please amend claim 11 without prejudice or disclaimer of the subject matter thereof as follows:

Claims 1.-5. (canceled).

Claim 6. (withdrawn) A method for detecting 10,000 cfu/ml or less of actively respiring microorganisms in a sample comprising:

trapping the microorganisms of said sample on a solid filtration membrane;

incubating the trapped microorganisms with a nutrient medium containing a predetermined amount of a viability substrate, wherein metabolism of said viability substrate by the microorganisms produces a viability marker;

digesting the microorganisms;

contacting primary antibodies prepared against a substituted formazan with the digested microorganisms to capture said primary antibodies;

contacting secondary antibodies prepared against the primary antibodies and conjugated with a detectable marker to captured primary antibodies; and

detecting the secondary antibodies that are bound to the captured primary antibodies.

Claim 7. (withdrawn) A method for detecting 10,000 cfu/ml or less of microorganisms comprising:

incubating the microorganisms with a nutrient medium containing a predetermined amount of a viability substrate, wherein metabolism of said viability substrate by the microorganisms produces a viability marker

digesting the microorganisms by incubation with a lysozyme to form a cellular debris, wherein the viability marker is adsorbed on a surface of the cellular debris;

immobilizing primary antibodies specific for the viability marker on a solid support;

contacting the digested microorganisms with the immobilized primary antibodies thereby capturing the microorganisms; and

detecting the presence of the viability marker.

Claim 8. (withdrawn) The method of claim 7 wherein the step of detecting comprises:

contacting the captured digested microorganisms with a reporter antibody prepared from the primary antibody, the reporter antibody being conjugated to a detectable marker; and

detecting the reporter antibodies that bind to the captured digested microorganisms.

Claim 9. (withdrawn) The method of claim 7 wherein the step of detecting comprises detecting the captured viability marker by detecting a change in a physical, a chemical, an optical, or an electrical property of the solid support.

Claim 10. (withdrawn) The method of claim 7 further comprising the steps of:

incubating the viability marker with a primary antibody specific for the viability marker and conjugated to a reporter molecule, thereby forming a primary antibody-antigen-reporter molecule sandwich; and

detecting the reporter molecule.

Claim 11. (currently amended) A method for detecting 10,000 cfu/ml or less of microorganisms comprising:

incubating the microorganisms with a nutrient medium containing a predetermined amount of a viability substrate, wherein metabolism of said viability substrate by the microorganisms produces a viability marker;

digesting the microorganisms;

incubating the digested microorganisms with a primary antibody specific for the viability marker;

conjugating the primary antibody to a reporter molecule to form a reporter-primary antibody complex; and

detecting the reporter molecules that form reporter-primary antibody complexes wherein the microorganisms are bacteria.

Claim 12. (withdrawn) A method for detecting less than 10,000 cfu/ml of actively respiring microorganisms in a sample comprising:

incubating the actively respiring microorganisms with a nutrient medium containing a predetermined amount of a viability substrate, wherein metabolism of said viability substrate by the microorganisms produces a viability marker;

digesting the microorganisms;
contacting a primary antibody prepared against a substituted formazan with the digested microorganisms;
contacting a secondary antibody prepared against the primary antibody, the secondary antibody being conjugated to a reporter molecule; and
detecting the reporter molecule.

Claim 13. (withdrawn) The method of claim 12 further comprising the step of trapping the actively respiring microorganisms on a solid filtration membrane.

Claim 14. (withdrawn) The method of claim 12 wherein the reporter molecule comprises an enzyme, a bioluminescent protein, a radioisotope, a chemiluminescent dye, a visible dye, a latex particle, a magnetic particle or a fluorescent dye.

Claim 15. (withdrawn) The method of claim 12 wherein the sample is a clinical sample, a food sample, a cosmetic sample, a pharmaceutical sample, an industrial sample or an environmental sample.

Claim 16. (withdrawn) The method of claim 12 wherein the sample is a blood sample, a tissue sample, a tissue homogenate sample or a bodily fluid sample.

Claim 17. (withdrawn) The method of claim 12 wherein the microorganisms comprises a single species of microorganisms or a mixed population of microorganisms.

Claim 18. (withdrawn) The method of claim 12 wherein the sample contains less than 1,000 cfu/mL.

Claim 19. (withdrawn) The method of claim 12 wherein the detecting takes less than two hours.

Claim 20.-24. (canceled).

Claim 25. (withdrawn) The method of claim 6, wherein the sample contains less than 1,000 cfu/mL.

Claim 26. (withdrawn) The method of claim 6, which takes less than two hours.

Claim 27. (withdrawn) The method of claim 7, wherein the microorganisms comprise

1,000 cfu/mL or less.

Claim 28. (withdrawn) The method of claim 7, which takes less than two hours.

Claim 29. (previously presented) The method of claim 11, wherein the microorganisms comprise 1,000 cfu/mL or less.

Claim 30. (previously presented) The method of claim 11, which takes less than two hours.

Please add the following as new claims 31 and 32.

Claim 31. (new) The method of claim 11, which takes less than eight hours.

Claim 32. (new) The method of claim 11, which takes less than twenty four hours.